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IV. Experimentum, in Argenti-Fodina Salana, circa ascensum Mercurii in Barometro, institutum. Per *And. Celsium*. Ex Actis Literariis Sueciæ Ann. 1724. Trimestr. IV.

**A**D variationem columnæ mercurialis observandam, pro diversa altitudine regionum atmosphæræ, fodinæ nostræ profundiores in primis idoneæ censerī debent. Harum enim profunditatem non modo omni exactitudine metiri; sed & brevi temporis spatio observationem totam absolvere licet. Quo sane commodo haud raro destituuntur, quibus circa altiores montes hæc talia experiri animus est. Si itaque quamplurima in variis fodinis instituerentur experimenta; nulli dubitamus, quin vera progressio, quâ densitates aeris decrescant, tandem sua sponte se proderet.

In *magna fodina Cuprimontana* argenti vivi ascensum a viro amplissimo *Georgio Vallerio* dudum observatum esse, ex litteris ipsius ad Cl. *De La Hire* d. 15 Julii, A. 1711. Fahlunæ datis, certiores reddimur. \*

In *argenti* vero *fodina Salana*, septem fere milliariibus ab Upsalia versus occidentem dissita, hujus rei periculum a me factum est die 28 Aug. currentis anni. Scilicet juxta limen *putei Regina Christina*, (*Drottning Christina Schatcht*,) hydrargyri altitudinem 30 digit. & 38 centes. seu  $\frac{12}{100}$  pedis Suecani observavi. Cum Barometro deinde in tonna, quæ funi adpensa machina hydraulica trahitur, ad profunditatem 636 pedum me demisi; ubi mercurius ad 30 dig. 98 centes. ascendisse de-

\* Vid. Memoires de l'Acad. R. des Sc. l'ann. 1712. p. 108.

prehensus est. Inde iterum euectus ad orificium putei, in eadem ac antea altitudine, nempe 30 dig. 38. cent. columnam mercurialem notavi. Adeo ut hydrargyrum 636 ped. in aere elatum 6 lineas seu  $\frac{4}{15}$  ped. descenderit; & sic consequenter, si aer æque densus ubique supponeretur, unius lineæ in cylindro mercuriali variatio, 106 ped. altitudini perpendiculari corresponderet. Horæ illius intervallo, quo integra perficiebatur observatio, cœlum erat pluvium nonnihil & ventosum; nulla tamen sensibilis mutatio, columnæ mercurialis in alio Barometro supra fodinam parieti affixo, isto tempore videri potuit.

Postero die, aëre sereno & tranquillo, ad basin templi urbis *Salæ*, haud procul a fodina distantis, argentum vivum 30 dig. 36 cent. altum hæsit, ad altitudinem vero 145 ped. in turri ejusdem templi scandens, mercurium ad 30 dig. 23 cent. substituisse deprehendi, ut unius lineæ in Barometro descensui, altitudo 111  $\frac{7}{8}$  ped. respondeat. Basis templi 60 fere pedes infra superficiem fodinæ deprimitur. Ipsius autem fodinæ elevationem supra mare Balticum explorare nondum licuit.

Ut hæc nostra observatio cum exterorum hujus generis experimentis rite conferri queat, notandum est inter pedem Suecanum & Parisinum Regium eam rationem intercedere, quæ est inter 1000 & 1096, seu 125 & 137 proxime; quam ex pede Gallico orichalceo, insignis artificis *Chapotot* manu insculpto, cum pede *Stiernhielmiano*, qui in Bibliotheca publica Upsal. servatur, collato, exactissime observavi.